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HONG KONG

REPORT ON THE BOTANICAL AND FORESTRY DEPARTMENT FOR THE YEAR 1927.

GENERAL REMARKS.

The weather throughout the whole year was unfavourable for gardening owing to the excessive rainfall which delayed planting and spoiled to a great extent the show of flowers on annuals and herbaceous plants; on the other hand forestry operations were much benefitted by wet conditions which prevailed up to about the third quarter of the year. The fourth quarter of the year was mild and dry and insect pests were in consequence very numerous.

The rainfall for the year was 120.12 inches in 176 days as against 96.77 inches on 162 days in 1926.

Typhoon signals were hoisted on seven occasions during the year and considerable damage was done to flowering and other trees in many parts of the Colony; the force of the exceptionally long gale which approached the Colony on August 20th was responsible for the major portion of the damage; in the Botanical Gardens the damage was fortunately comparatively slight.

GARDENS, PARKS AND GROUNDS.

Botanic Gardens.—Alterations to earth banks were undertaken in the immediate vicinity of the plant houses in the Old Garden, this and the rebuilding of a retaining wall enabled a much needed compound and water tank to be established.

A number of old paths which were originally made of Chunam and which were dangerous in wet weather were broken up and relaid with cement granite.

The plot on the west side of the fountain terrace was sown with seed of "Dhoob Grass", the seeds germinated freely and at the end of the year the grass was in fair condition although weaker than that obtained by laying turf.

A 15 year old tree of *Cassia javanica* flowered for the first time and produced a fine show of large pink blooms.

The total number of young trees and plants sold during the year was 1681.

The number of regular and casual visitors was noticeably larger, this was most probably due to the fact that a further number of the roads in the Colony are now open to motor traffic.

Government House Grounds.—The bamboo hedges on the north side of the grounds were repaired and extended.

Tennis lawns were given such attention as they required and the various grass banks were cleared of undergrowth regularly.

A small path was made in order to give access to the lower grounds from the north side of the house.

The interior of the house was decorated on June 3rd the occasion of the Birthday of His Majesty the King, other portions of the house were decorated as required, throughout the year.

Mountain Lodge Grounds.—A number of young specimens of *Cupressus macrocarpa* and *Cunninghamia sinensis* were planted in various parts of the grounds, those in the higher* and more exposed parts were damaged and in many cases killed by gales, those in the valley were doing well at the end of the year.

Amaryllis bulbs and *Iris tectorum* were planted alongside the stream and in sheltered spots in the valley.

On grassy slopes in various parts of the grounds seeds of *Pinus Massoniana* were sown in 2,250 sites.

Worn portions of the lawns were lifted and replaced with new turf, the whole turfed area was given a dressing of artificial manure.

Colonial Cemetery.—The debris which was piled on various plots after the severe rainstorm of July 18th and 19th, 1926 was removed by the Public Works Department and the damaged areas were levelled and returfed, this has greatly improved the appearance of the lower portion of the cemetery.

A large number of the indigenous trees on the older terraces were removed in order to avoid damage to graves and headstones.

The Eyrie Grounds.—A number of *Cupressus macrocarpa*, *Pinus Massoniana* and *Hibiscus Lambertianus* were planted on level areas.

The lawns were given heavy dressings of soil and vegetable ash and have much improved in consequence.

Blake Garden, West End Park, King's Park, Kowloon, Civil Hospital and Lunatic Asylum, Senior Officers' Quarters, Leighton Hill, Indian School, Sukunpo, Volunteer Headquarters, Helena May Institute, Statue Square, Victoria Hospital, Senior Officers' Quarters, Homestead, Government Pavilions and Villas, Royal Observatory and Kowloon Magistracy. The grounds of all the places mentioned were kept in order during the year, undesirable undergrowth was removed, storm damaged trees and shrubs were removed and replaced and grass lawns, banks, trees, shrubs and other plants were given such attention as they required.

HERBARIUM AND LIBRARY.

The interior of the building was treated by the Government Analyst on June 16th and 17th with Hydrocyanic gas in order to destroy the insects which cause so much destruction among the books and plant specimens, up to the end of the year no live insect was found in any part of the building.

Plant specimens of botanical interest and economic value were identified for local collectors and institutions in the Colony and elsewhere.

FORESTRY.

Formation of Pine Tree Plantations.—Increased areas were dealt with during the year, and the number of *in situ* sowings of seed of *Pinus Massoniana* amounted to 197,476 as against 70,500 in 1926. Not less than 5 seeds were sown in each site in order to allow for failure and damage by small animals and birds; the total weight of seed used in this method of re-afforestation was 115 pounds.

The areas dealt with were West Bay peninsula, Mount Collinson, Stanley Mound Catchwater, Tai Wo Po, Shek Li Pui reservoir area, Kowloon Tsai, hills adjoining Kowloon Bay, Castle Peak near the Police Station, Taipo Forestry Reserve and bare hills in the Peak District.

Other and more grassy areas where germination of seeds without preparation of sites may be expected were sown by the broadcast method, the total weight of seeds of *Pinus Massoniana* used in this work was 995 pounds; trials are now being made with *Leucaena glauca* and 129 pounds of seeds of this tree were used, experimental sowings were made with small lots of *Pinus insularis*, *Cunninghamia sinensis*, *Acacia pennata* and *Acacia confusa*.

Broad-leaved Trees Planted.—Small groups of the following trees were planted in the young Pine plantations and the more sheltered areas on the Island and in the New Territories, the major portion of such work being carried out in Taipo Forestry

Reserve, *Tristania conferta*, *Aleurites Fordii*, *Acacia confusa*, *Cunninghamia sinensis*, *Pithecolobium Saman*, *Cinnamomum Camphora*, *Ginkgo biloba*, *Celtis sinensis* and *Glyptostrobus heterophyllus*.

The planting of roadside trees for shade and decorative purposes was maintained and extended during the year, large number of trees were killed or damaged by the gale of August 20th and could not be replaced before the end of the year; the force of the gale did most damage between Castle Peak and Sheung Shui where many fine specimens of *Melaleuca Leucadendron* were destroyed.

Trees Felled.—Increased motor traffic necessitated the removal of a number of large shade trees from the sides of the motor roads.

Other felling was carried out in connection with the development of building sites, the formation of dairy farms and the leasing of the necessary grass growing areas adjoining the farms, extensions of cemeteries and work in connection with reservoir catchment areas.

Miscellaneous Planting.—Planting of shade and flowering trees, shrubs and creepers was carried on in large numbers of otherwise unused small open spaces in all parts of the Colony.

Undergrowth Clearing.—Anti-malarial clearing has now been extended to Taipo district where systematic removal of undergrowth is carried out in the vicinity of houses and public buildings, twice annually.

During the year the total areas cleared in connection with anti-malarial measures totalled 3,905,835 square feet, for other purposes such as surveys, training of nullahs and other public improvements the areas cleared amounted to 2,642,305 square feet.

Insect Pests.—Pine Tree Caterpillars (*Eutricha punctata*) appeared in the Pine plantations in many parts of the Colony in March and were in evidence at the end of the year; serious damage was done to Pine trees during the month of June. Collection and burying of the caterpillars was commenced when there was no longer any hope of weather condition destroying the pest, the total amount collected and destroyed in all parts of the Colony was 14,637 pounds.

Protection from fire.—A total of 30 hill and plantation fires occurred during the year, no serious damage was done to any Government plantation but large numbers of wild trees on the slopes of Tai Mo Shan were destroyed. Little or no assistance in dealing with fires was given by village people living within short distances of the burnt areas; most of the fires appeared to be due to careless dropping of lighted tobacco or matches.

The wet days preceding the Tsing Ming and Chung Yeung festivals prevented the usual number of fires which break out in vicinity of isolated graves and cemeteries.

Fire barriers in plantations, in the vicinity of cemeteries and graves were cleared, the major portion of the work being completed before the end of the year.

A new fire barrier was made at West Bay in order to protect the young plantations which have been established there.

Forest Guards Service.—The total number of persons arrested and charged with forestry offences during the year was 355, of these 300 were fined or imprisoned, 26 cautioned, 10 had their bail estreated, 10 were discharged, 6 bound over in personal bonds of \$100 each and charges against 3 were withdrawn.

Full particulars of these cases are given in Tables I & II.

Fifteen persons who were convicted of a second and in some cases of a third or fourth forestry offence were banished. A number of the persons so dealt with lived entirely on the proceeds of timber and other thefts and their absence from the Colony has undoubtedly lessened the destruction of mature timber in the older plantations.

Chiefly as a result of penalties inflicted and warnings given in District Officers' Courts the amount of illicit felling of the larger indigenous trees in outlying districts was much less than during the past five years.

Efforts are still being made to stop the cutting of New Year Flower (*Enkianthus quinqueflorus*) and notices are now posted in all parts of the Colony for some weeks prior to Chinese New Year warning the villagers against destroying this flowering shrub; this and the fact that a plentiful supply is now brought down from Canton has had the effect of lessening the more serious wholesale cuttings but thefts of small quantities in the Wanchai Gap and Tytam districts were again numerous.

A Forest Guard was seriously assaulted by villagers from Chung Pak Long while on duty in the Pine plantations at Fan Ling the offenders were subsequently arrested and sentenced to terms of imprisonment.

Forestry Service Paths.—One new path leading from Stanley Gap to West Bay was made, all other paths were given such attention as they required.

Forestry Licences, New Territories.—Fees collected during the year amounted to \$4,099.70 as against \$4,888.74 in 1926.

AGRICULTURE ETC.

A general exhibit of foreign vegetables was staged at the first New Territories Agricultural Show which was held at Sheung Shui on November 7th and 8th.

More interest is now displayed in the cultivation of both foreign and native vegetables for local consumption, this is chiefly due to increased motor transport and the communication between the Hong Kong markets and the New Territories villages which was established during labour troubles and consequent shortage of fresh vegetables during 1925.

Inspection of Nursery Stock.—Eleven consignments of bulbs of *Narcissus Tazetta* were inspected during the year, of these four consignments totalling 57,106 bulbs were exported to United States of America and Honolulu; seven consignments totalling 177,840 bulbs were exported to Britain and British Colonies.

Small consignments of fruits, dried legumes and vegetables were inspected before being exported to the Philippine Islands by local firms.

SEED COLLECTION.

Seeds of the following were collected for local use and for the purpose of exchange, *Casuarina equisetifolia*, *Cunninghamia sinensis*, *Glyptostrobos heterophyllus*, *Leucaena glauca*, *Bauhinia variegata*, *Cassia fistula*, *Tristania conferta*, *Sterculia lanceolata*, *Ficus retusa*, *Callistemon lanceolata*, *Garcinia oblongifolia*, *Melia Azedarach*, *Callistemon rigidus*, *Cinnamomum Camphora*, *Poinciana regia*, *Aleurites Fordii*, *Aleurites montana*, *Aleurites triloba*, *Acacia pennata* and *Pinus Massoniana*.

EXCHANGE OF SEEDS, &C.

The Department is indebted to the following donors of seeds, plants &c. The Curator, Lloyd Botanic Garden, Darjeeling; Director of Agriculture, Peradeniya; Superintendent, La Mortola, Ventimiglia, Italy; Director, Forestry Department, Sandakan; Botanic Gardens, Glasgow; Bureau of Forestry, Manila; Horto Botanico Tergestino, Trieste, Italy; Dr. A. Gundersen (New York); Professor J. Balme (Mexico); Lt. Colonel E. D. Matthews; Mrs. R. M. Dyer and Messrs. J. F. Grose; C. H. Blason; M. J. Quist (Consul-General for the Netherlands); W. Dixson (Sydney); R. A. Nicholson, W. W. Hornell, and C. C. Nelson.

The following were the principal recipients. Director, Imperial Institute, England; Department of Agriculture, Peradeniya; Ministry of Agriculture, Horticultural Section, Giza (Mudiriya), Egypt; Royal Botanic Gardens, Kew; Senor Matheus d'Andrade (Azores); Sir Edward Stubbs (Jamaica);

Director of Agriculture, Cape St. Mary, Colony of Gambia; Brother Barry Benedict; Secretary, Royal Hong Kong Golf Club; Father U. Galbiati; Lt. Colonel E. D. Matthews; Rev. W. W. Rogers; Conservator of Forests, Medan, Sumatra; and Messrs. M. J. Quist (Consul-General for the Netherlands); H. G. Keith (Sandakan); F. G. Walsingham (U.S.A.); D. M. Damle (India); W. Y. Chun; R. H. Cambage (Australia); R. A. Nicholson; D. Chun; R. H. Cambage (Australia); R. A. Nicholson; D. Wilson; F. A. McClure (Canton); R. N. Parker (India); Chan Yuk Sang; W. Cradwick (Jamaica) and H. D. McLaren (N Wales).

REVENUE AND EXPENDITURE.

Statements of the Revenue collected by the Department and comparison of Revenue and Expenditure are given in Tables III and IV.

STAFF.

The Assistant Superintendent Mr. G. B. Twernlow proceeded on leave on April 2nd until the end of the year.

H. GREEN,

Superintendent.

28th February, 1928.

Table I.
FOREST GUARDS SERVICE OFFENCES.

Village or District.	Block.	Compartment.	REPORT OF:—														Damaging Govern- ment plantation.	Cattle grazing in plantation.	Seed stealing.	Trespass- ing upon plantation.	Offering bribe to Forest Guard.	Assault on Forest Guard.	Conspiring to bring a false charge.
			Pine tree stealing.	Pine tree branch stealing.	Pine tree needle stealing.	Barking pine tree.	Brush- wood stealing.	Grass cutting	Bamboo stealing.	Fern stealing.	Wild flower stealing.	Digging up tree roots.	Turf lifting.	Extract- ing stone.	Soil stealing.								
Victoria	1	A.B.D.E.G.	3	2	—	—	8	1	—	—	1	—	—	—	—	—	—	—	5	—	—	—	
Wongneichung ..	2	A.B.C.D.G.	8	—	—	—	6	—	—	1	—	—	5	—	—	—	—	2	7	—	—	—	
Shaukiwan	3	B.D.E.F.	2	1	—	1	11	2	—	1	—	1	—	—	—	—	—	—	11	—	—	—	
Tytam	4	C.	3	—	—	—	4	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Stanley	5	A.B.F.	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	
Aberdeen	6	A.B.D.	10	1	—	—	14	1	—	—	—	—	—	—	—	—	—	—	2	—	—	—	
Pokfulam	7	A.C.D.E.F.G.	2	3	—	—	1	—	—	—	—	—	2	—	—	—	—	2	7	—	—	—	
Kowloon	8	B.	21	—	—	—	5	—	—	—	—	—	1	—	—	—	—	1	2	—	—	—	
Harbour Belt ..	9	A.B.C.D.	20	7	13	1	21	—	2	—	—	—	—	—	—	—	—	2	77	—	—	—	
Cheungshawan .	10	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Kang Hau	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
New Territories.	12	—	4	5	2	—	15	—	—	—	—	—	—	—	—	—	—	—	4	—	10	—	
Total for 1927.....			76	20	15	2	85	8	2	2	1	1	8	—	—	—	—	5	2	118	—	10	—
Total for 1926.....			79	42	8	2	97	1	6	—	4	2	1	1	2	1	—	—	22	1	6	1	

Table II.

POLICE COURT RESULTS.

<i>Case.</i>		1927	1926
\$ 1.00 to \$ 2.00 fine		30	9
2.50 ,, 3.00 ,,		3	2
4.00 ,, 5.00 ,,		27	6
6.00 ,, 10.00 ,,		37	24
11.00 ,, 15.00 ,,		15	3
16.00 ,, 20.00 ,,		16	11
21.00 ,, 25.00 ,,		19	4
30.00 ,, 35.00 ,,		3	4
36.00 ,, 40.00 ,,		—	2
50.00 fine		5	2
100.00 ,,		—	2
1 to 4 days' imprisonment		2	—
5 ,, 7 ,,		19	15
8 ,, 14 ,,		54	56
3 weeks' imprisonment		35	36
4 ,, ,,		12	10
5 ,, ,,		—	1
6 ,, ,,		15	19
8 ,, ,,		—	1
1 month's ,,		6	28
2 ,, ,,		—	2
3 ,, ,,		—	1
6 ,, ,,		2	1
Discharges		10	13
Cautions		26	13
Forfeiture of Bail		10	4
Received Strokes		—	3
Personal Bond		6	—
Withdrawn		3	4
TOTAL		355	276

Table III.

REVENUE.

Revenue.	1927.	1926.
	\$	\$
Timber Sales	2,382.15	4,094.23
Plant Sales	708.24	1,038.34
Loan of Plants	271.32	516.16
Forestry Licences	4,099.70	4,888.74
Inspection of Nursery Stock ..	—	100.00
Sale of Condemned Stores	12.31	10.00
Other Miscellaneous Receipts ..	256.33	30.60
Interest on Current Account ...	28.05	24.29
Fine Fund	103.66	96.59
Total	7,861.76	10,798.95

Table IV.

Comparative Statement of Revenue and Expenditure
for the years 1918-1927.

Year.	Total Expenditure.	Total Revenue.	% of Revenue to Expenditure.
	\$	\$	
1918	51,967.08	6,282.45	12.09
1919	51,457.65	8,307.77	16.16
1920	55,975.49	8,547.76	15.27
1921	61,428.11	10,657.86	17.35
1922	71,223.47	12,464.32	17.50
1923	77,157.40	15,848.76	20.54
1924	86,516.80	13,038.79	15.07
1925	96,371.63	9,806.95	10.18
1926	87,642.19	10,798.95	12.32
1927	93,289.09	7,861.76	8.43